

Mar. 1875.

Mr. Marth, *Ephemeris of Mars.*

305

Ephemeris for Physical Observations of Mars. By A. Marth, Esq.

(Communicated by Mr. De La Rue.)

OPPOSITION OF 1875.

Greenwich, Noon. 1875.	Angle of Posit. of Mars' Axis. °	Areographical W. Long. | of the Centre of Mars' Disk. Diff.	Lat. °	Dia- meter. "	Amount and Posit. of Greatest Defect of Illumination.		Areocentric Ang. between Sun & Earth. °
May 1	26°93	140°7	—5°53	13·87	1°03	269°48	31°64
6	26°46	94°3	5°71	14°66	0°97	269°44	29°84
11	26°13	48°2	5°74	15°49	°89	269°63	27°96
16	25°95	2°3	5°63	16°34	°79	270°10	25°37
21	25°94	316°7	5°35	17°21	°66	270°94	22°66
26	26°09	271°4	4°92	18°01	°53	272°3	19°64
31	26°42	226°3	4°33	18°92	°38	274°4	16°28
June 5	26°93	18°14	—3°59	19°70	°24	277°9	12°64
10	27°57	136°8	2°73	20°38	°12	284°4	8°78
15	28°32	92°4	1°79	20°92	°04	300°5	4°99
20	29°13	48°1	—0°81	21°30	°01	3°0	2°77
25	29°95	3°8	+0°15	21°50	°05	57°8	5°49
30	30°74	319°5	1°06	21°51	°15	73°3	9°49
July 5	31°44	275°1	+1°86	21°34	°30	79°6	13°64
10	32°00	230°4	2°50	21°00	°49	83°2	17°65
15	32°42	185°6	2°96	20°52	°71	85°6	21°41
20	32°68	140°5	3°23	19°95	0°92	87°23	24°87
25	32°76	95°1	3°29	19°31	1°13	88°40	28°03
30	32°68	49°4	3°17	18°63	1°32	89°19	30°86
Aug. 4	32°43	3°4	+2°85	17°93	1°48	89°74	33°38
9	32°02	317°1	2°37	17°23	1°61	89°87	35°58

Greenwich, Noon. 1875.	Angle of Posit. of Mars' Axis. °	Areographical W. Long. l of the Centre of Mars' Diff. °	Lat. Disk. °	Dia- meter. "	Amount and Posit. of Greatest Defect of Illumination. "		Areocentric Ang. between Sun & Earth. °
Aug. 14	31°45	270°6	1°72	16°54	1°71	89°86	37°51
		1753°2					
19	30°73	223°8	0°93	15°87	1°78	89°65	39°17
		53°1					
24	29°87	176°9	+0°02	15°23	1°83	89°26	40°60
		52°8					
29	28°87	129°7	-1°01	14°62	1°86	88°72	41°82
		52°6					
Sept. 3	27°73	82°3	-2°13	14°03	1°87	88°06	42°85
		1752°4					
8	26°46	34°7	-3°34	13°48	1°87	87°27	43°71

June 7. Equinox, the Sun passing from the North to the South side of the Equator.

Areographical Longitude and Latitude of the Centre of the Disk and Apparent Diameter at the Times to which the Sketches in the Publications of the Royal Astronomical Society refer.

OPPOSITION OF 1862.

Memoirs of the Royal Astronomical Society, Vol. xxxii.

Mr. Lockyer. Plates I.-IV.

		Date	h m	°	°	"
Pl. I.	I.	1862 Sept. 23	10 25 G.M.T.	350°2	-21°3	22°9
	2		11 55	12°1	...	...
	3		12 55	26°7	...	...
	4	17	10 50	49°4	-20°7	22°5
	II.		after			
	1					
	2	Oct. 18	8	94°3	-24°2	21°4
	3	15	9 8	137°5	-23°9	21°8
	4	rather past	9 20	140°5	...	...
	III.					
	1	Oct. 11	11 4	201°2	-23°4	22°3
	2	9	10 47	214°7	-23°1	22°5
	3	3	10 30	263°3	-22°4	22°9
	4		11 23	276°2	...	...
	IV.					
	1		11 51	283°0	...	...
	2	Sept. 25	10 44	337°2	-21°5	...
	3		10 50	338°6	...	...
	4	23	9 40	339°2	-21°3	...

Lord Rosse. Plate V.

Pl. V. I	Date	h m	°	°	"
1	1862 July 22	22 30	Birr Castle 278°0	-23°2	14°6
			Sid. Time		
2	Sept. 14	0 26	113°5	-20°5	22°2
Assuming that, the hour 6 ^h given on the engraving being obviously a mistake, the substitution of 0 ^h 26 ^m is the most plausible conjecture.					
3	Sept. 16	23 55	86°2	-20°6	22°4
4	Oct. 6	2 10	283°3	-22°8	22°7
5	29	1	39°5	-25°3	19°5
6	Nov. 6	1 40	328°9	-25°9	17°9

Mr. Lassell. Plates VI., VII.

Pl. VI. 1	1862	Sept. 13	439 G.M.T.	81	-20°5	22°1
2			20°44	19	-21°0	22°7
3			22°44	1	-21°2	22°8
4			24°44	343	-21°4	22°9
5			25°44	335	-21°5	22°9
6			27°46	320	-21°7	23°0
7			29°43	296	-21°9	23°0
8	Oct.	11	40	180	-23°4	22°3
9		13	40	162	-23°7	22°0
10		15	40	144	-23°9	21°8
11		17	43	137	-24°1	21°5
12		18	43	128	-24°2	21°4
VII. 13	1862	Oct.	21°36	77	-24°6	20°9
14			23°39	69	-24°8	20°5
15			25°38	48	-25°0	20°2
16			27°31	6	-25°2	19°8
17	Nov.	4	32	297	-25°8	18°3
18		5	32	288	-25°9	18°1
19		15	30	189	-26°3	16°3
20		17	28	163	-26°4	15°8
21		18	28	154	-26°4	15°7
22		22	29	120	-26°5	15°0
23	Dec.	8	29	329	-26°3	12°5
24		11	29	300	-26°1	12°1

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OPPOSITION OF 1864.

Mr. Dawes. *Monthly Notices*, Vol. xxv.; *Memoirs*, Vol. xxxiv.

No.				h m		°	°	"
2	1864	Nov.	3	12 24	G.M.T.	127.5	- 1.2	16.4
4		Dec.	1	12 0		233.7	- 6.6	17.3
6		Nov.	26	11 46		274.3	- 5.6	17.4
8			20	11 36		324.6	- 4.2	17.4
10			14	12 0		24.0	- 3.0	17.2
12			12	12 30		49.1	- 2.6	17.1
13			10	12 6		60.5	- 2.3	17.0
15	1865	Jan.	21	8 0		75.1	- 10.1	11.2

OPPOSITION OF 1873.

Mr. Knobel. *Monthly Notices*, Vol. xxxiii. p. 476 ff.

No.				h m		°	°	"
1	1873	Apr.	20	11 40	G.M.T.	269.0	+ 16.8	16.0
2			23	11 10		235.4	+ 17.3	16.2
3				12 15		251.2	...	...
4			26	11 20		211.5	+ 17.9	16.4
5		May	11	9 15		49.5	+ 20.4	...
6				10 0		60.4	...	...
7			12	7 45		18.7	+ 20.5	...
8				12 10		83.3	+ 20.6	...
9			13	12 20		76.9	+ 20.7	16.3
10			16	11 0		30.9	+ 21.1	16.2
11			19	10 20		354.6	+ 21.5	16.0
12				12 30		26.2	...	...
13			22	11 30		344.9	+ 21.9	15.8
14			23	9 0		299.5	+ 22.0	15.7
15			30	9 50		248.7	+ 22.6	15.1
16			31	9 30		234.7	+ 22.6	15.0
17		June	8	8 30		147.3	+ 22.9	14.2

It is very desirable that, when sketches are made, the times should be properly noted, when the leading points are laid down.

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